**Year 6 Lynnfield Curriculum Progressions Overview - Maths**

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| **Year 6** | **Autumn** | **Spring** | **Summer** |
| **Objectives** | **Egyptians****‘Can you walk like an Egyptian?’ - History (Healthy eaters)** | **The Amazon Rainforest****‘Deforestation’ – How WOOD you like it?’ - Geography(Healthy movers)** | **Every BODY changes****‘Can you embrace change?’- Science (Healthy thinkers)** |
| **NPVR** | * Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.
* Round any whole number to a required degree of accuracy.
* Use negative numbers in context, and calculate intervals across zero.
* Solve number and practical problems that involve all of the above.
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| **ASMD** | * Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why.
* Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication.
* Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context.
* Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division, interpreting remainders according to the context.
* Perform mental calculations, including with mixed operations and large numbers.
* Identify common factors, common multiples and prime numbers.
* Use their knowledge of the order of operations to carry out calculations involving the four operations.
* Solve problems involving addition, subtraction, multiplication and division.
* Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy.
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| **F** | * Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.
* Compare and order fractions, including fractions > 1
* Generate and describe linear number sequences (with fractions)
* Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example 1/4 x 1/2 = 1/8 ]
* Divide proper fractions by whole numbers [for example 1/3 ÷ 2 = 1/6].
* Associate a fraction with division and calculate decimal fraction equivalents [ for example, 0.375] for a simple fraction [for example 3/8 ]
* Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
 | * Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1,000 giving answers up to 3 decimal places.
* Multiply one-digit numbers with up to 2 decimal places by whole numbers.
* Use written division methods in cases where the answer has up to 2 decimal places.
* Solve problems which require answers to be rounded to specified degrees of accuracy.
* Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison.
* Recall and use equivalences between simple fractions, decimals and percentages including in different contexts.
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| **Al** |  | * Use simple formulae
* Generate and describe linear number sequences.
* Express missing number problems algebraically.
* Find pairs of numbers that satisfy an equation with two unknowns.
* Enumerate possibilities of combinations of two variables.
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| **R&P** |  | * Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.
* Solve problems involving similar shapes where the scale factor is known or can be found.
* Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.
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| **M** |  | * Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.
* Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp.
* Convert between miles and kilometres.
* Recognise that shapes with the same areas can have different perimeters and vice versa.
* Recognise when it is possible to use formulae for area and volume of shapes.
* Calculate the area of parallelograms and triangles.
* Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm3, m3 and extending to other units (mm3, km3)
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| **Sh** |  |  | * Draw 2-D shapes using given dimensions and angles.
* Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons.
* Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
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| **P&D** | * Describe positions on the full coordinate grid (all four quadrants).
* Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
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| **St** |  |  | * Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.
* Interpret and construct pie charts and line graphs and use these to solve problems.
* Calculate the mean as an average.
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